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09/965,598	09/26/2001	Michael J. Joyce	930039-2050	3503

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EXAMINER

HUG, ERIC J

ART UNIT	PAPER NUMBER
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1731

DATE MAILED: 09/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/965,598

Applicant(s)

JOYCE ET AL.

Examiner

Eric Hug

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2001 and 13 March 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10-15, 18-23, 26 and 30-40 is/are rejected.
- 7) ☒ Claim(s) 9, 16, 17, 24, 25, 27-29, 35, 37 and 39 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 March 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign mentioned in the description: 20 (MD grooves).

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

Claims 35, 37, and 39 are objected to as being substantial duplicates of claims 24, 26, and 28, respectively. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 2, 3, 8, and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 recites the limitation "wherein the fabric has a woven substrate". It is uncertain whether this corresponds to the embossed substrate of claim 1. The claim as written allows for

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the possibility of a woven substrate (which may or may not be embossed) in addition to the substrate of claim 1.

Claims 3, 8, and 10 depend from claim 2.

2. Claims 4 and 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 4 recites the limitation "wherein the fabric has a polymeric substrate". It is uncertain whether this corresponds to the embossed substrate of claim 1. The claim as written allows for the possibility of a polymeric substrate (which may or may not be embossed) in addition to the substrate of claim 1.

Claim 6 depends from claim 4.

3. Claims 35-40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 35-40 each recite the limitation "the pattern". There is insufficient antecedent basis for this limitation in the claim. Since the independent claim recites a first pattern and a second pattern, it is uncertain which pattern is being claimed.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 4 and 11-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Stech (US 4,842,905). Stech discloses a tessellated papermaker's fabric which comprises a molded or extruded plastic material. The fabric is an endless belt for supporting and conveying a paper web through the paper making process. The embodiment of Figures 14 and 15 has a pattern of projections and depressions on the lower plane of the fabric (opposite the web contacting side), providing channels for enhanced drainage and water removal. Other embodiments incorporate a pattern of apertures through the fabric. Surface characteristics such as these can be produced by means of an embossing roll (see column 5, lines 6-10). These features of the embodiment of Figures 14 and 15 read on those of claim 1, namely a substrate having a top surface that carries a product from which fluid is extracted, and having a patterned embossed bottom surface for receiving fluid which passes through the substrate. With respect to the dependent claims:

Claim 4: The substrate is polymeric (molded or extruded).

Claim 11: The fabric has uses as a forming fabric or press fabric.

Claim 12: The fabric can have a felted layer (i.e. a fiber batt layer) as the web contacting surface (claim 9 of Stech).

Claim 13: The aforementioned embodiment has a substantially smooth top surface.

5. Claims 1, 4, and 11-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Lefkowitz (US 4,740,409). Lefkowitz discloses a nonwoven paper machine fabric having nonwoven yarns embedded within a polymeric matrix. The fabric is fed into a drive roll arrangement having a heated bottom roll with pin extremities (41) to form holes in the bottom side of the fabric by locally melting the matrix material (see particularly Figure 4). The holes provide fluid passages for water removed from a supported web. Thus, the fabric of Lefkowitz has features which read on those of claims 1 and 4, namely a polymeric substrate having a top surface that carries a product from which fluid is extracted, and having a patterned embossed bottom surface for receiving fluid which passes through the substrate. With respect to the other dependent claims:

Claim 11: The fabric is suitable as a forming fabric, a press felt, or dryer fabric.

Claim 12: The fabric has a fibrous surface layer (fiber batt layer) on the paper contacting side, integrally bound to the matrix material (Figures 10 and 11).

Claim 13: The fabric has a smooth top surface (see particularly Figure 11).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-4, 7, 8, 11-15, 18-23, 26, 30-34, 37, and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson et al (US 6,140,260). Johnson discloses a papermaking felt having a hydrophobic flow control layer rendered porous by embossments (see layer 20 of Figures 2, 4, 7-13; see also sheet 21 of Figure 3 which makes up layer 20). The flow control layer facilitates flow of water from a paper web through the felt when compressed in a press nip and impedes the backflow of water when the pressure is relieved. Several embodiments of the felt are disclosed incorporating one or more flow control layers, one or more fibrous batt layers, and a base fabric layer attached together. Embodiments having a flow control layer disposed directly underside the web-side batt layer (Figures 2, 7-10, and 13) read on the elements of claim 1, namely a substrate having a top surface that carries a product from which fluid is extracted, and having a patterned embossed bottom surface (at least) for receiving fluid which passes through the substrate. Embodiments having two flow control layers, with a first flow control layer being disposed directly underside the web-side batt layer (Figures 8, 10, 11 and 13) read on the elements of claim 14, namely the same elements of claim 1 and a second substrate with an embossed pattern for receiving fluid in adjoining relationship with the first substrate. With respect to the dependent claims:

Claims 2 and 3: Layer 18 is a woven substrate having warp and weft yarns (filaments).

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Claim 4: The flow control layer is a thermoplastic polymeric substrate (see materials in column 4, lines 15-20).

Claims 7 and 8: The flow control layer is a fusible layer that allows for the embossed pattern to be formed.

Claim 11: The fabric is a press felt of a paper making machine.

Claim 12: The fabric has a fibrous surface layer as the paper contacting side, integrally bound to the other layers.

Claim 13: The fabric has a smooth web side (top) surface (see Figures).

Claim 15: In Figure 11, two control flow layers each having an embossed pattern are disposed adjacent to one another.

Claim 18: The layers are needled together.

Claims 19-21: In Figure 8, the two flow control layers may or may not be identically patterned. In the situation where the patterns are identical, then they are in matching relationship to each other (see column 9, lines 4-13).

Claims 22-23, 32: The presence of woven and polymeric substrates is discussed above.

Claim 26: The presence of a fusible web component (the flow control layer) has been described above.

Claim 30, 33, 34: The fibrous batt layer is a non-woven layer. A batt layer is present on at least the top surface, which is a smooth surface.

Claim 31: The fabric is a press felt.

Claims 37 and 38: The flow control layer is a fusible layer that allows for the embossed pattern to be formed.

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7. Claims 1-4 and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beaumont et al (US 3,399,111). Beaumont discloses a supplemental belt used in conjunction with a web carrying belt in a paper machine. The supplemental belt is arranged on the inside (opposite web side) of a fourdrinier belt or wet felt in order to facilitate removal of water therefrom. It is made of a polymer sheet having perforations and protuberances integrally formed with the web carrying belt, formed for example by embossing (see column 12, lines 26-42). The supplemental belt may also comprise a compressible layer of a woven textile fabric, foam layer, or fibrous batt laminated to its outer surface (the surface in contact with the underside of the web carrying belt).

The supplemental belt is used in conjunction with another belt which supports the web, therefore the supplemental belt does not have a web-carrying surface per se. However, the claims are unpatentable in view of *In re Larson*, 340 F. 2d 965, 968, 144 USPQ 347, 349 (CCPA 1965) whereby making elements integral is within the skill of a routineer in the art [MPEP 2144.04]. Thus, at the time of the invention it would have been prima facie obviousness to integrate the supplemental belt of Beaumont with a web carrying belt and form one single belt, particularly since the combination achieves the objectives of the present invention.

8. Claims 1-3, 5, and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Botelho et al (US 6,554,963) in view of Stech or Lefkowitz or Beaumont. Botelho discloses an endless woven paper making fabric having an embossed web side surface. The fabric can be used as a forming fabric, press fabric, or drying fabric. The fabric is woven from polymeric yarns comprising monofilaments or multifilaments. The fabric can include a batt layer (column

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3, line 47) attached by needling (column 5, line 9). A heated calender roll deforms the web side surface of the woven fabric, the deformation conforming to a prescribed pattern on the heated roll. The fibers of the fabric are fused (melted) together resulting from heat and pressure. Unlike the present invention, the embossments are on the web side of the fabric, rather than on the bottom surface.

The claims are unpatentable, because the claimed fabric is exactly that of Botelho, except turned upside down. Based on any of the teachings given by Stech or Lefkowitz or Beaumont, one would recognize that the fabric of Botelho could also be used with the embossed side of the fabric as the bottom side. Such an arrangement facilitates the removal of water from the fabric as it passes through from the web. Therefore, at the time of the invention, it would have been obvious to one skilled in the art to utilize the fabric of Botelho in an inverted position with the smooth side contacting the web and the embossed side on the bottom to facilitate the removal of water therefrom. This obviousness is further exemplified by Botelho himself, who teaches that the permeability of the fabric is affected by the degree of compression and fusion of the embossed areas (column 5, lines 34-44).

Allowable Subject Matter

Claims 9, 16, 17, 24, 25, and 27-29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 6, 10, 35, 36, 39, and 40 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claim 6 is allowable for the combination of a polymeric substrate and a low melt fiber which is treated to reinforce and maintain the embossed pattern.

Claims 9 and 10 are allowable for the feature of a spray adhesive component.

Claims 16, 25, 27, and 29 are allowable for the feature of a third embossed pattern.

Claim 17 is allowable for specifically embossing the second pattern on the bottom surface of the second substrate.

Claims 24, 35, and 36 are allowable for the feature of a low melt fiber in a two-substrate fabric.

Claims 28, 39, and 40 are allowable for the feature of a spray adhesive component in a two-substrate fabric.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Beaumont et al (US 3,323,226) discloses a paper dryer belt having a fibrous batt attached to a perforated polymer base sheet (Figure 4).

Balcar (US 4,206,258) discloses a multilayer felt made of thermoplastic fibers and having channels for water, whereby the channels are formed by fusing the felt at selected locations using radiation.

Schiel (US 6,159,880) discloses a paper machine felt having in Figure 5 an upper surface that carries a web and a lower surface comprised of a base layer with cavities.

Otto et al (US 6,183,601) discloses in Figure 13 a papermaking fabric having an upper surface that carries a web and a lower surface comprised of an apertured composite membrane.

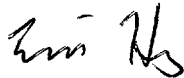
NOTE: Otto cites Lefkowitz as one means of producing an apertured layer.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Hug whose telephone number is 703 308-1980. The examiner can normally be reached on Monday through Friday, 9:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 703 308-1164. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308-0651.



jeh


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